

REMARKS

Applicant has now carefully considered all aspects of the above-identified Office Action including the grounds cited by the Examiner for objecting to the as filed claims 1-17. In response, Applicant has carefully amended the claims in this Application to remove all objections to patentability, whereby it is believed that all remaining claims under examination, including new claim 25 which replaces original claim 1, are now in condition for immediate allowance. More specifically, it will be seen that claims 1-5 have been canceled and replaced by a new claim 25. Claims 6-9 previously dependant on claim 1 have been amended to render them dependant on claim 25. Claim 10 has also been canceled as now redundant.

Of original claims 1-17, claims 1-10 relate to the white pozzolan *per se*, while claims 11-17 relate to a blended pozzolanic cement which is produced by blending portland cement with the white pozzolan powder of claims 1-10. With regards to prior claims 11-17 it will be noted that claim 11 has now been amended to incorporate the new limitations of present claim 25, and the remainder of the claims adjusted by amendment or otherwise to reflect this change.

With regard first to the Examiner's formal objections, it will be seen that all claims now recite that the glass utilized in the pozzolan is indeed a calcium alumino silicate glass (a CAS). The Examiner's objection to the phrase "low alkali" and "low iron" have been overcome by incorporation of the applicable numerical data. The same rectification applies to the Examiner's objection to the phrase "low level of discolorants" in that the actual brightness of the pozzolan is now carefully recited.

Regarding the Examiner's objection to the terms "P.S.D." and "E.S.D.", this is respectfully traversed. In the course of the specification these terms are clearly elucidated to respectively mean "particle size distribution" and "equivalent spherical diameter". It is also respectfully pointed out that these terms and their abbreviations are universally utilized in particle size terminology, and for these reasons are deemed to have completely clear meanings to those skilled in the art.

The Examiner's objection to a minor aspect of the Markush terminology in claim 15 has also been rectified. The Examiner's objection to claim 16 has been overcome by adding in the word "coloring" before "pigment" to render clear that claim 16 is not directed to a white cement.

Turning to the art bases for rejection of claim 1 as originally presented, such rejection is predicated solely upon the Potter, et al. patent US 4,438,212 (which is deemed equivalent to UK patent application no. 2,122,986). Especially as now amended, it is considered that this reference is fully and patentably distinguished.

First some general comments are in order concerning the present invention. Thus, it will be evident that claims 1-10 do indeed relate to the white pozzolan powder per se which is derived from what were previously considered waste glass fibers produced during fiber glass manufacture. The white pozzolan product has now been much more extensively defined in the amended claims. Specifically, claim 25, the broadest pozzolan claim, now recites the alkali and iron content of the glass used, and moreover, specifically recites that the glass is

substantially white in color as measured by an identified colorimeter measuring technique to have a reflectance value of at least 80. The particle size distribution is also set forth in terms of the sub-45 micron particles; but moreover it is recited that the particles have a “blocky relatively equi-dimensional particle shape” with “substantially no residual high aspect ratio fibers” and that “the average aspect ratio of the particles is less than 2:1.” It is respectfully submitted that while the glass used in the Potter reference may be a rather fine low alkali low iron glass, there is no teaching whatsoever respecting the color of the glass, much less measurements pertaining to same nor; is there in Potter et al. any teaching whatsoever that the particles should have a blocky relatively equi-dimensional shape with substantially no residual high aspect ratio fibers; nor is it taught in that reference that the average aspect ratio of the particles should be less than 2:1. It is submitted that all of these recitations are critical to the present invention in defining the particles and indeed are what enables production of highly useful white and other materials from the input glass previously considered as waste fibers.

It is also noted that while the Examiner has cited a basis for rejection of claim 1 as originally presented, no bases have been set forth for rejection of claims 2-9, which include numerous other limitations, many of which as just pointed out are simply untaught or unsuggested in the Potter reference.

For this reason it is believed that the replacement claim 25 now presented is fully patentable, and the Examiner's concurrence in this is respectfully requested.

Returning further, however, to the remaining claims being considered, i.e. claims 11-

17, these of course do not relate only to the pozzolan of claims 1-10 but specifically relate to a combination of the pozzolan with a portland cement. It is submitted that this combination is even more remote from Potter than has been discussed for claims 1-10. First because the broadest claim 11 for this combination has now been amended to include all those limitations on the pozzolan which are now present in claim 25; and moreover because the reference relied upon by the Examiner simply does not even teach a combination of any sort between a glass powder and a portland cement. In fact Potter relates to a completely dissimilar type of composition namely a composition, based upon combination of a CAS glass powder with a polymeric matrix for purposes of preparing a surgical splinting. See the general discussion of this for example at col. 2, lines 50-53 of the Potter reference. While the word "cement" is used in the reference for the combination, it must be appreciated that such term, i.e. "cement" is being used in Potter et al. in a generic sense, i.e. the term "cement" is a generic term used for any materials that are used to glue, adhere, join, bond, etc., together compounds or surfaces. For example, asphalt used to bind sand and stone in black top for highways is considered in this sense a "cement" is as plaster used to make wall board, or epoxy used to adhere metals and plastics. In the present invention, the CAS is however mixed with portland cement which is a very specific type of material wherein the CAS functions as a pozzolan that reacts with calcium hydroxide liberated from the hydration of portland cement to produce additional hydraulic cementitious binding compounds like calcium silicate hydrate. Indeed, unlike Potter's splinting cement, portland cement based systems used in construction a) do not require the presence of any acids and b) cannot tolerate the amount of alkali (Na) in the splinting cement formulation.

In view of these vast differences it is respectfully submitted that the Potter reference is totally inapplicable in the rejection of claims 11-17 and favorable reconsideration of these claims and indeed of all claims (1, 6-9, 11-17 and 25) now under consideration, is respectfully requested.

Respectfully submitted,



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